

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-17 (Cancelled).

18. (Currently Amended) A communications system, comprising:
a first queue pair (QP) associated with a first connection;
a second QP associated with a second connection;
a shared receive queue (SRQ) shared by the first QP and the second QP; and
a watermark indicating a low level of work queue elements (WQEs) on the SRQ,
wherein an out-of-order WQE limit is associated with the SRQ.

19. (Original) The communications system according to claim 18, wherein, if a number of WQEs on the SRQ drops below the watermark, then an asynchronous event is generated.

20. (Original) The communications system according to claim 19, wherein the asynchronous event notifies at least one of an upper layer protocol (ULP) layer, a buffer manager, and any part of a consumer that the number of WQEs on the SRQ has dropped below the watermark.

21. (Original) The communications system according to claim 19, wherein at least one of the ULP layer, a buffer manager, and any part of a consumer analyzes completions posted on a shared completion queue (SCQ) shared by the first QP and the second QP.

22. (Original) The communications system according to claim 21, wherein the ULP layer determines which of the first QP or the second QP is transporting excessive traffic or offending traffic.

23. (Cancelled).

24. (Currently Amended) ~~The communications system according to claim 18,~~ A communications system, comprising:

a first queue pair (QP) associated with a first connection;

a second QP associated with a second connection;

a shared receive queue (SRQ) shared by the first QP and the second QP; and

a watermark indicating a low level of work queue elements (WQEs) on the SRQ,

wherein a first out-of-order WQE limit is associated with the first QP, and

wherein a second out-of-order WQE limit is associated with the second QP.

25. (Cancelled).

26. (Currently Amended) The method according to claim ~~25~~ 28, comprising:

analyzing completions on a completion queue (CQ) to determine if either the first QP or the second QP is draining the WQEs on the shared RQ.

27. (Original) The method according to claim 26, wherein the CQ comprises at least one of a dedicated CQ and a shared completion queue (SCQ).

28. (Currently Amended) ~~The method according to claim 25, comprising:~~ A method for communications, comprising:

sharing a receive queue (RQ) between a first queue pair (QP) associated with a first connection and a second QP associated with a second connection;

setting a threshold that is associated with the shared RQ and is indicative of a particular number of work queue elements (WQEs) on the shared RQ;

generating an asynchronous event if the threshold is reached; and

setting an out-of-order WQE limit for the shared RQ.

29. (Currently Amended) ~~The method according to claim 25, comprising:~~ A method for communications, comprising:

sharing a receive queue (RQ) between a first queue pair (QP) associated with a first connection and a second QP associated with a second connection;

setting a threshold that is associated with the shared RQ and is indicative of a particular number of work queue elements (WQEs) on the shared RQ;

generating an asynchronous event if the threshold is reached; and

setting a first out-of-order WQE limit for the first QP.

30. (Currently Amended) ~~The method according to claim 25, comprising:~~ A method for communications, comprising:

sharing a receive queue (RQ) between a first queue pair (QP) associated with a first connection and a second QP associated with a second connection;

setting a threshold that is associated with the shared RQ and is indicative of a particular number of work queue elements (WQEs) on the shared RQ;

generating an asynchronous event if the threshold is reached; and

setting an out-of-order WQE limit which is part of another local limit.

31. (Currently Amended) The method according to claim ~~25~~ 28, comprising:
dropping a WQE holding an out-of-order message from the SRQ upon reaching a particular watermark.

32. (New) The method according to claim 29, comprising:
analyzing completions on a completion queue (CQ) to determine if either the first QP or the second QP is draining the WQEs on the shared RQ.

33. (New) The method according to claim 30, comprising:
analyzing completions on a completion queue (CQ) to determine if either the first QP or the second QP is draining the WQEs on the shared RQ.

34. (New) The method according to claim 32, wherein the CQ comprises at least one of a dedicated CQ and a shared completion queue (SCQ).

35. (New) The method according to claim 33, wherein the CQ comprises at least one of a dedicated CQ and a shared completion queue (SCQ).

36. (New) The method according to claim 29, comprising:
dropping a WQE holding an out-of-order message from the SRQ upon reaching a particular watermark.

37. (New) The method according to claim 30, comprising:
dropping a WQE holding an out-of-order message from the SRQ upon reaching a particular watermark.

38. (New) The communications system according to claim 24, wherein, if a number of WQEs on the SRQ drops below the watermark, then an asynchronous event is generated.

39. (New) The communications system according to claim 38, wherein the asynchronous event notifies at least one of an upper layer protocol (ULP) layer, a buffer manager, and any part of a consumer that the number of WQEs on the SRQ has dropped below the watermark.

40. (New) The communications system according to claim 38, wherein at least one of the ULP layer, a buffer manager, and any part of a consumer analyzes completions posted on a shared completion queue (SCQ) shared by the first QP and the second QP.

41. (New) The communications system according to claim 40, wherein the ULP layer determines which of the first QP or the second QP is transporting excessive traffic or offending traffic.

42. (New) The communications system according to claim 18, comprising:
a manager that provides statistical provisioning for the SRQ.

43. (New) The communications system according to claim 18, wherein the first QP and the second QP are part of a particular node.

44. (New) The communications system according to claim 42,
wherein an incoming message is received by the first QP,

wherein at least one of the first QP and the manager determines a number of resources to request for the first QP, and

wherein at least one of the first QP and the resource manager determines whether the first QP is allowed to draw any resources from the SRQ.

45. (New) The communications system according to claim 24, comprising:
a manager that provides statistical provisioning for the SRQ.

46. (New) The communications system according to claim 45, wherein the first QP and the second QP are part of a particular node.

47. (New) The communications system according to claim 45,
wherein an incoming message is received by the first QP,
wherein at least one of the first QP and the manager determines a number of resources to request for the first QP, and
wherein at least one of the first QP and the resource manager determines whether the first QP is allowed to draw any resources from the SRQ.